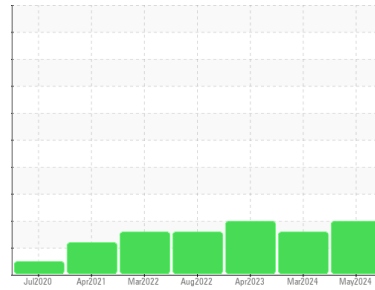




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
6320074 (S/N 1017)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	KCPA007576	KCPA015978	KCPA001280	
Sample Date	Client Info	15 May 2024	25 Mar 2024	10 Apr 2023	
Machine Age	hrs	Client Info	14133	13649	11156
Oil Age	hrs	Client Info	0	1588	0
Oil Changed	Client Info	N/A	Changed	N/A	
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL	

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	<1	2	<1
Chromium	ppm	ASTM D5185m >10	0	<1	0
Nickel	ppm	ASTM D5185m >3	0	0	0
Titanium	ppm	ASTM D5185m >3	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >10	0	<1	0
Lead	ppm	ASTM D5185m >10	0	0	0
Copper	ppm	ASTM D5185m >50	1	5	3
Tin	ppm	ASTM D5185m >10	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	0	0	0
Barium	ppm	ASTM D5185m 90	85	39	56
Molybdenum	ppm	ASTM D5185m 0	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 100	79	47	88
Calcium	ppm	ASTM D5185m 0	3	2	1
Phosphorus	ppm	ASTM D5185m 0	1	<1	0
Zinc	ppm	ASTM D5185m 0	<1	0	3
Sulfur	ppm	ASTM D5185m 23500	21036	23160	20232

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<1	2	<1
Sodium	ppm	ASTM D5185m	17	16	14
Potassium	ppm	ASTM D5185m >20	7	4	6
Water	%	ASTM D6304 >0.05	0.027	0.007	0.018
ppm Water	ppm	ASTM D6304 >500	278	79	183.9

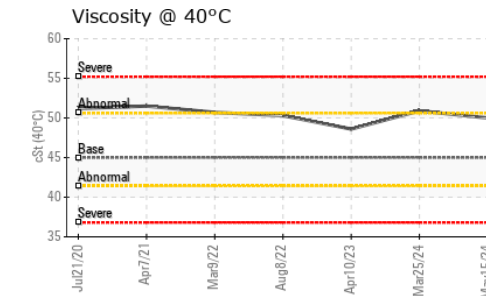
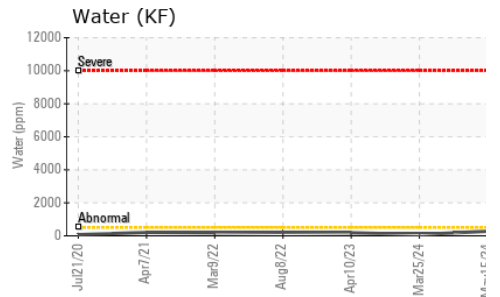
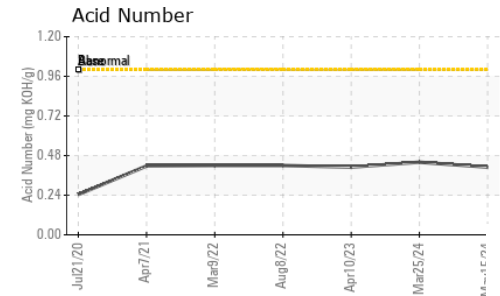
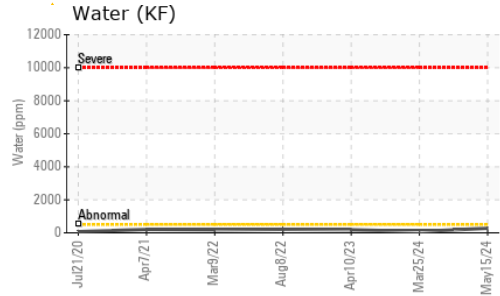
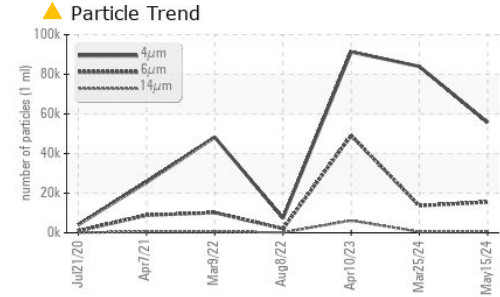
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	55651	83967	91323
Particles >6µm	ASTM D7647 >1300	▲ 15538	▲ 13627	▲ 49116
Particles >14µm	ASTM D7647 >80	▲ 751	▲ 529	▲ 6176
Particles >21µm	ASTM D7647 >20	▲ 185	▲ 137	▲ 1500
Particles >38µm	ASTM D7647 >4	▲ 11	1	▲ 40
Particles >71µm	ASTM D7647 >3	1	0	1
Oil Cleanliness	ISO 4406 (c) >--/17/13	▲ 23/21/17	▲ 24/21/16	▲ 24/23/20

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	0.41	0.44	0.41

OIL ANALYSIS REPORT

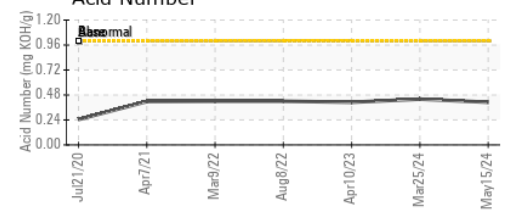
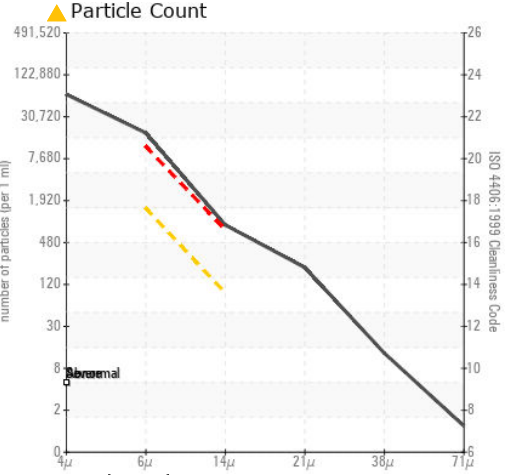
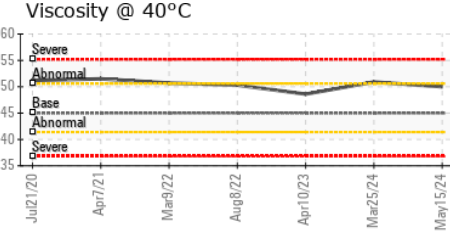
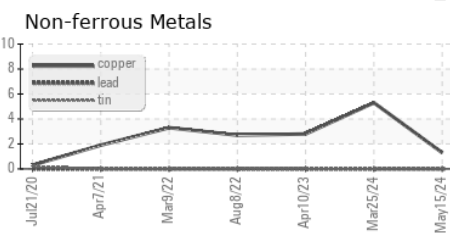
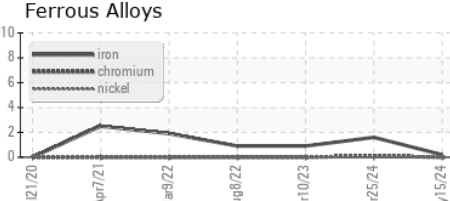


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 45	50.0	50.9	48.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA007576 **Received** : 11 Jun 2024
Lab Number : 06206529 **Tested** : 13 Jun 2024
Unique Number : 11073990 **Diagnosed** : 13 Jun 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

PERMAGREEN PRODUCTS
 5520 HARLAN ST
 ARVADA, CO
 US 80002
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)